Upper Pocomoke Agricultural BMP Study

Location: **Wicomico County, MD / Sussex County, DE**
Green Run tributary to Pocomoke River.

Contact: **John McCoy** (jmccoy@dnr..state.md.us)
MD DNR, Watershed Restoration Division
580 Taylor Ave., E-2; Annapolis, MD 21401
410-260-8803

Restoration at the Watershed Level

The Upper Pocomoke Agricultural Best Management Practice Study uses a paired watershed design to compare two subwatersheds located in the Green Run tributary of the Pocomoke River.

Farming practices will remain unaltered in the **control watershed**, whereas in the **treatment watershed**, *Best Management Practices* (BMP) are implemented and monitored for their effectiveness in reducing nutrient and sediment loads.

Two types of water quality samples are retrieved for this study; *grab samples* taken in-situ once a week, and *automated composite samples* collected at regular intervals over a one week period.

The treatment period began in 1998 with 100% of the farming operations in the watershed participating. In cooperation with the Wicomico Soil Conservation District, BMPs currently being implemented for this study include; 1) transporting all poultry litter from the treatment watershed, and replacing that nutrient source with inorganic fertilizers, 2) use of cover crops, and 3) development of nutrient management plans on all cropland acreage.

Over the years, results from the control and treatment watersheds will be compared to determine if BMP implementation is effective in reducing long term nutrient and sediment concentrations. Nutrient budgets developed from 1998 to 2001 indicate that nutrient surpluses in the control watershed have remained constant, while nutrient surpluses in the treatment watershed have decreased approximately 92% for nitrogen and 98% for phosphorus.

Instrument housing for automated composite sampling of stream water. Readings of Total Suspended Solids (TSS), Total Nitrogen (TN) and Total Phosphorus (TP) are recorded weekly.

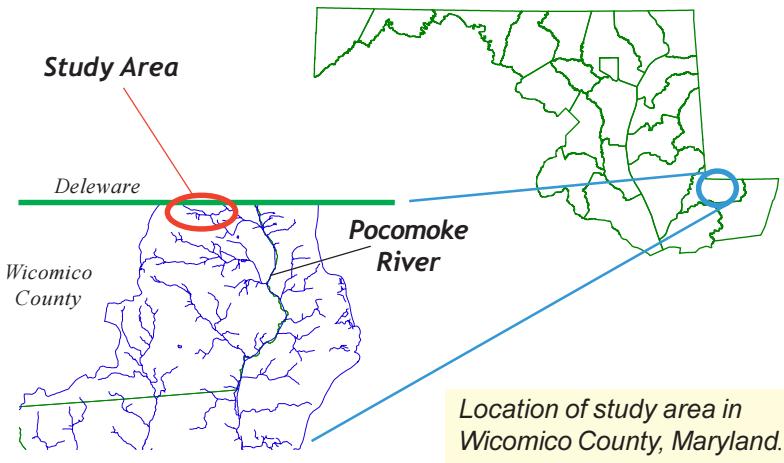
Site 222 - North Fork Green Run. Biologist takes in-situ grab sample to be compared with automated composite sample.

Treatment Watershed

Total Acres	1,779
Crop Acres	848
Chicken Capacity	179,000

Control Watershed

Total Acres	2,342
Crop Acres	1,554
Chicken Capacity	490,000



Location of study area in Wicomico County, Maryland.